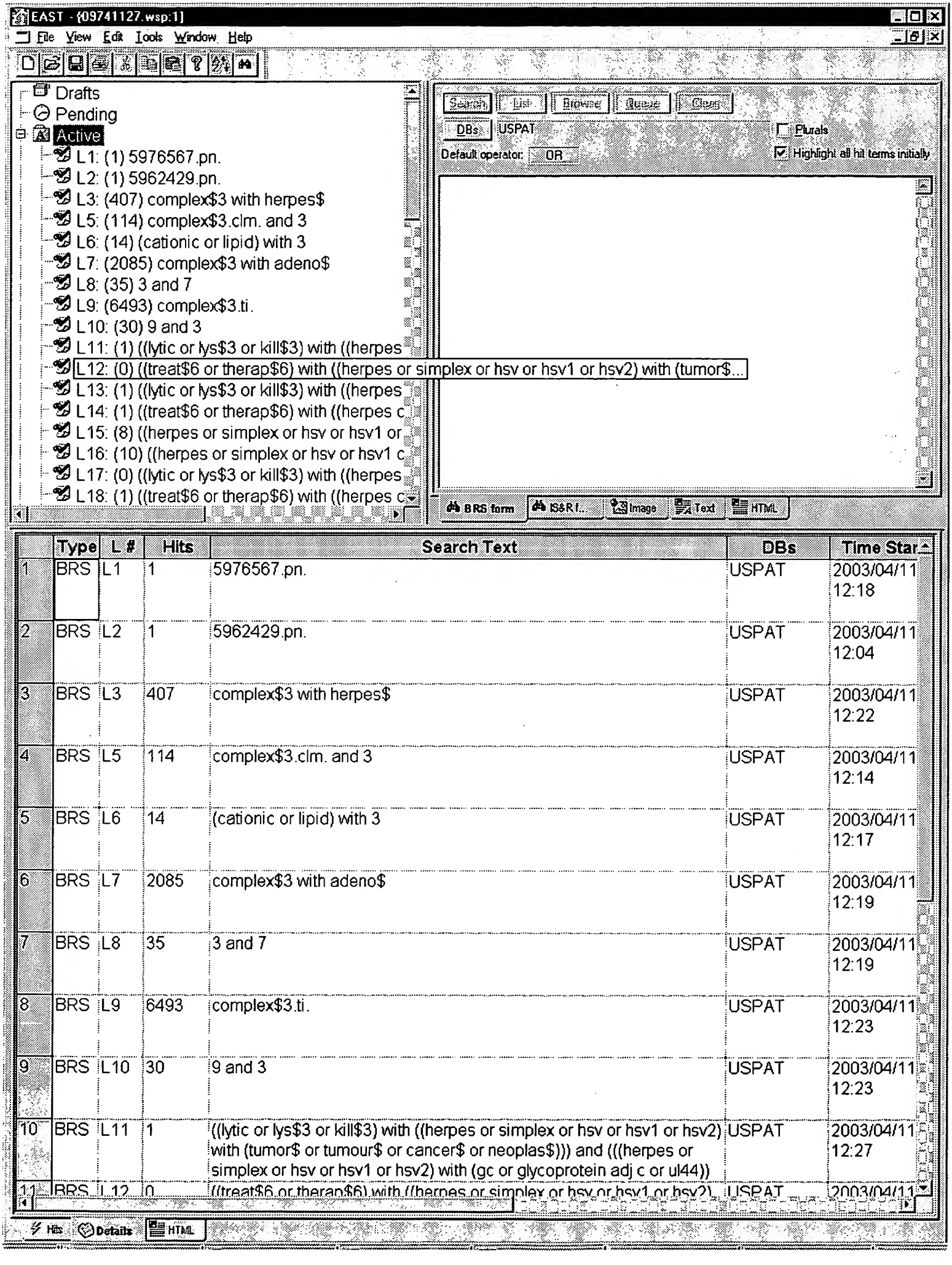
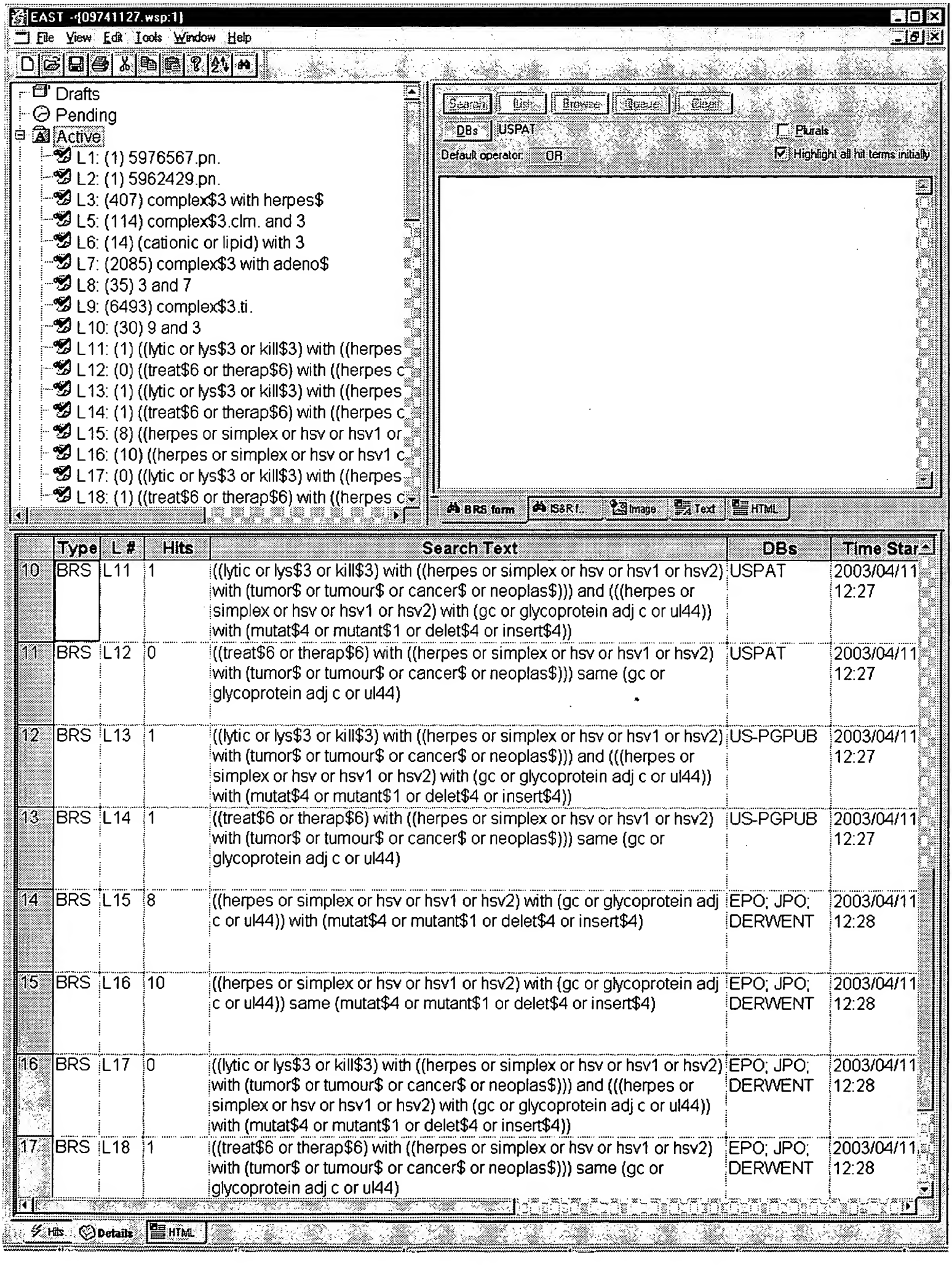
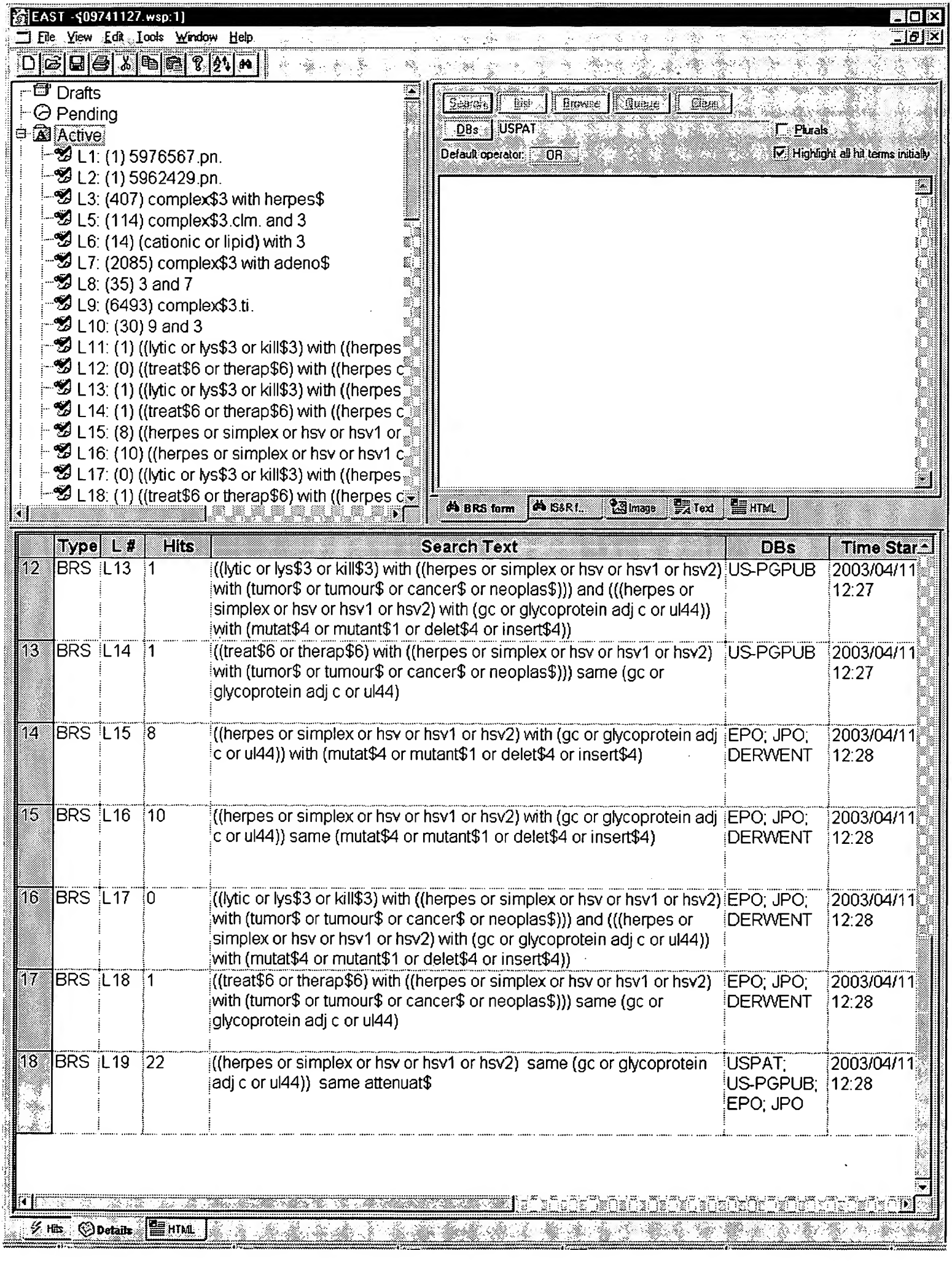


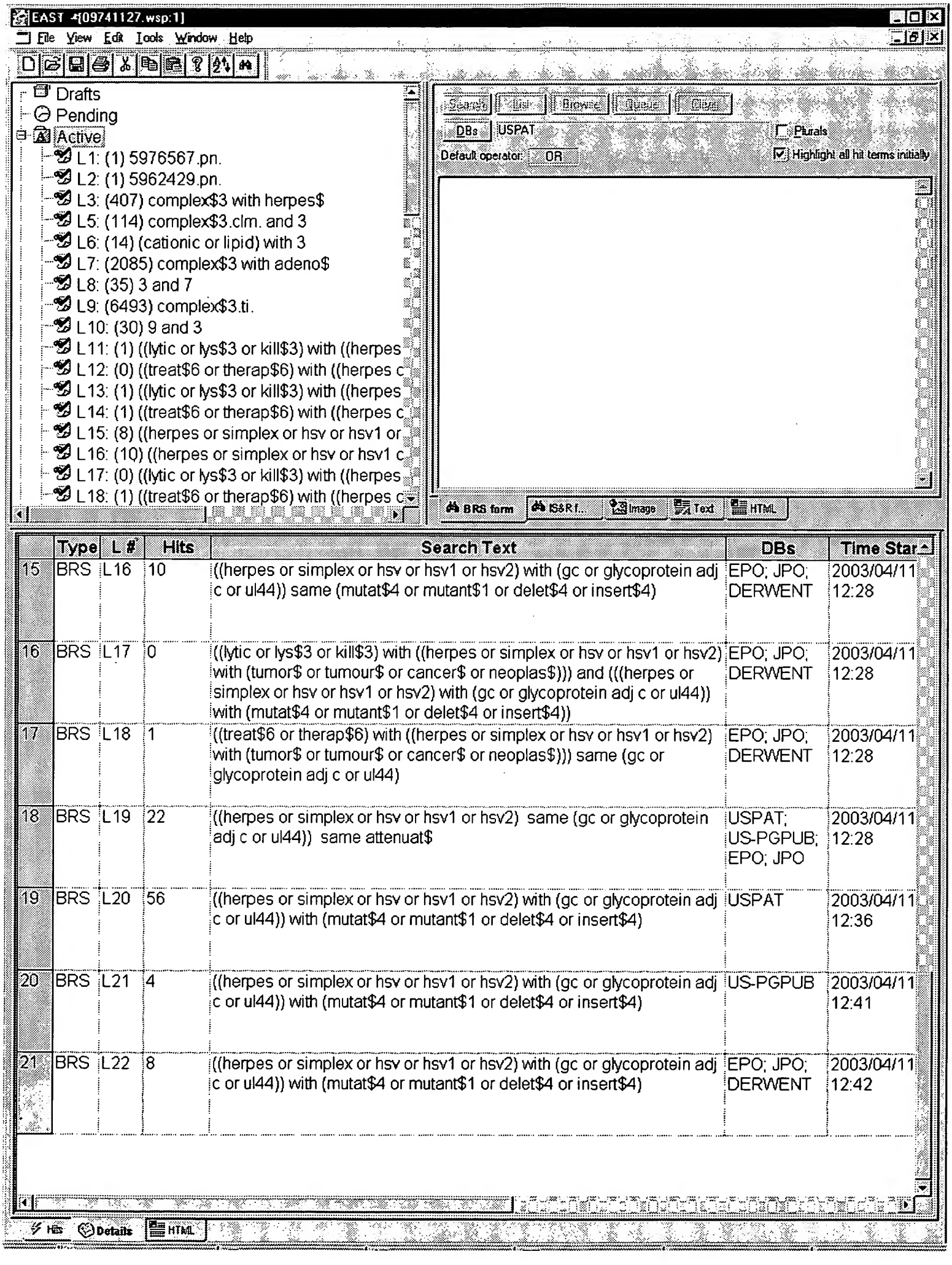
	Type	L #	Hits	Search Text	DBs	Time Star
1	BRS	L1	1	5976567.pn.	USPAT	2003/04/11 12:18
2	BRS	L2	1	5962429.pn.	USPAT	2003/04/11 12:04
3	BRS	L3	407	complex$3 with herpes$	USPAT	2003/04/11 12:22
4	BRS	L5	114	complex$3.clm. and 3	USPAT	2003/04/11 12:14
5	BRS	L6	14	(cationic or lipid) with 3	USPAT	2003/04/11 12:17
6	BRS	L7	2085	complex$3 with adeno$	USPAT	2003/04/11 12:19
7	BRS	L8	35	3 and 7	USPAT	2003/04/11 12:19
8	BRS	L9	6493	complex$3.ti.	USPAT	2003/04/11 12:23
9	BRS	L10	30	9 and 3	USPAT	2003/04/11 12:23
10	BRS	L11	1	((lytic or lys$3 or kill$3) with ((herpes or simplex or hsv or hsv1 or hsv2) with (tumor$ or tumour$ or cancer$ or neoplas$))) and (((herpes or simplex or hsv or hsv1 or hsv2) with (gc or glycoprotein adj c or ul44))	USPAT	2003/04/11 12:27
11	BRS	L12	0	((treat$6 or therap$6) with ((herpes or simplex or hsv or hsv1 or hsv2)	USPAT	2003/04/11



	Type	L #	Hits	Search Text	DBs	Time Star
10	BRS	L11	1	((lytic or lys$3 or kill$3) with ((herpes or simplex or hsv or hsv1 or hsv2) with (tumor$ or tumour$ or cancer$ or neoplas$))) and (((herpes or simplex or hsv or hsv1 or hsv2) with (gc or glycoprotein adj c or ul44)) with (mutat$4 or mutant$1 or delet$4 or insert$4))	USPAT	2003/04/11 12:27
11	BRS	L12	0	((treat$6 or therap$6) with ((herpes or simplex or hsv or hsv1 or hsv2) with (tumor$ or tumour$ or cancer$ or neoplas$))) same (gc or glycoprotein adj c or ul44)	USPAT	2003/04/11 12:27
12	BRS	L13	1	((lytic or lys$3 or kill$3) with ((herpes or simplex or hsv or hsv1 or hsv2) with (tumor$ or tumour$ or cancer$ or neoplas$))) and (((herpes or simplex or hsv or hsv1 or hsv2) with (gc or glycoprotein adj c or ul44)) with (mutat$4 or mutant$1 or delet$4 or insert$4))	US-PGPUB	2003/04/11 12:27
13	BRS	L14	1	((treat$6 or therap$6) with ((herpes or simplex or hsv or hsv1 or hsv2) with (tumor$ or tumour$ or cancer$ or neoplas$))) same (gc or glycoprotein adj c or ul44)	US-PGPUB	2003/04/11 12:27
14	BRS	L15	8	((herpes or simplex or hsv or hsv1 or hsv2) with (gc or glycoprotein adj c or ul44)) with (mutat$4 or mutant$1 or delet$4 or insert$4)	EPO; JPO; DERWENT	2003/04/11 12:28
15	BRS	L16	10	((herpes or simplex or hsv or hsv1 or hsv2) with (gc or glycoprotein adj c or ul44)) same (mutat$4 or mutant$1 or delet$4 or insert$4)	EPO; JPO; DERWENT	2003/04/11 12:28
16	BRS	L17	0	(((lytic or lys$3 or kill$3) with ((herpes or simplex or hsv or hsv1 or hsv2) with (tumor$ or tumour$ or cancer$ or neoplas$))) and (((herpes or simplex or hsv or hsv1 or hsv2) with (gc or glycoprotein adj c or ul44)) with (mutat$4 or mutant$1 or delet$4 or insert$4))	EPO; JPO; DERWENT	2003/04/11 12:28
17	BRS	L18	1	((treat$6 or therap$6) with ((herpes or simplex or hsv or hsv1 or hsv2) with (tumor$ or tumour$ or cancer$ or neoplas$))) same (gc or glycoprotein adj c or ul44)	EPO; JPO; DERWENT	2003/04/11 12:28



	Type	L #	Hits	Search Text	DBs	Time Star
12	BRS	L13	1	((lytic or lys$3 or kill$3) with ((herpes or simplex or hsv or hsv1 or hsv2) with (tumor$ or tumour$ or cancer$ or neoplas$))) and (((herpes or simplex or hsv or hsv1 or hsv2) with (gc or glycoprotein adj c or ul44)) with (mutat$4 or mutant$1 or delet$4 or insert$4))	US-PGPUB	2003/04/11 12:27
13	BRS	L14	1	((treat$6 or therap$6) with ((herpes or simplex or hsv or hsv1 or hsv2) with (tumor$ or tumour$ or cancer$ or neoplas$))) same (gc or glycoprotein adj c or ul44)	US-PGPUB	2003/04/11 12:27
14	BRS	L15	8	((herpes or simplex or hsv or hsv1 or hsv2) with (gc or glycoprotein adj c or ul44)) with (mutat$4 or mutant$1 or delet$4 or insert$4)	EPO; JPO; DERWENT	2003/04/11 12:28
15	BRS	L16	10	((herpes or simplex or hsv or hsv1 or hsv2) with (gc or glycoprotein adj c or ul44)) same (mutat$4 or mutant$1 or delet$4 or insert$4)	EPO; JPO; DERWENT	2003/04/11 12:28
16	BRS	L17	0	((lytic or lys$3 or kill$3) with ((herpes or simplex or hsv or hsv1 or hsv2) with (tumor$ or tumour$ or cancer$ or neoplas$))) and (((herpes or simplex or hsv or hsv1 or hsv2) with (gc or glycoprotein adj c or ul44)) with (mutat$4 or mutant$1 or delet$4 or insert$4))	EPO; JPO; DERWENT	2003/04/11 12:28
17	BRS	L18	1	((treat$6 or therap$6) with ((herpes or simplex or hsv or hsv1 or hsv2) with (tumor$ or tumour$ or cancer$ or neoplas$))) same (gc or glycoprotein adj c or ul44)	EPO; JPO; DERWENT	2003/04/11 12:28
18	BRS	L19	22	((herpes or simplex or hsv or hsv1 or hsv2) same (gc or glycoprotein adj c or ul44)) same attenuat$	USPAT; US-PGPUB; EPO; JPO	2003/04/11 12:28



	Type	L #	Hits	Search Text	DBs	Time Stamp
15	BRS	L16	10	((herpes or simplex or hsv or hsv1 or hsv2) with (gc or glycoprotein adj c or ul44)) same (mutat$4 or mutant$1 or delet$4 or insert$4)	EPO; JPO; DERWENT	2003/04/11 12:28
16	BRS	L17	0	((lytic or lys$3 or kill$3) with ((herpes or simplex or hsv or hsv1 or hsv2) with (tumor$ or tumour$ or cancer$ or neoplas$))) and (((herpes or simplex or hsv or hsv1 or hsv2) with (gc or glycoprotein adj c or ul44)) with (mutat$4 or mutant$1 or delet$4 or insert$4))	EPO; JPO; DERWENT	2003/04/11 12:28
17	BRS	L18	1	((treat$6 or therap$6) with ((herpes or simplex or hsv or hsv1 or hsv2) with (tumor$ or tumour$ or cancer$ or neoplas$))) same (gc or glycoprotein adj c or ul44)	EPO; JPO; DERWENT	2003/04/11 12:28
18	BRS	L19	22	((herpes or simplex or hsv or hsv1 or hsv2) same (gc or glycoprotein adj c or ul44)) same attenuat$	USPAT; US-PGPUB; EPO; JPO	2003/04/11 12:28
19	BRS	L20	56	((herpes or simplex or hsv or hsv1 or hsv2) with (gc or glycoprotein adj c or ul44)) with (mutat$4 or mutant$1 or delet$4 or insert$4)	USPAT	2003/04/11 12:36
20	BRS	L21	4	((herpes or simplex or hsv or hsv1 or hsv2) with (gc or glycoprotein adj c or ul44)) with (mutat$4 or mutant$1 or delet$4 or insert$4)	US-PGPUB	2003/04/11 12:41
21	BRS	L22	8	((herpes or simplex or hsv or hsv1 or hsv2) with (gc or glycoprotein adj c or ul44)) with (mutat$4 or mutant$1 or delet$4 or insert$4)	EPO; JPO; DERWENT	2003/04/11 12:42

? b 155
11apr03 13:05:36 User208669 Session D2256.1
$0.27 0.077 DialUnits File1
$0.27 Estimated cost File1
$0.01 TELNET
$0.28 Estimated cost this search
$0.28 Estimated total session cost 0.077 DialUnits

File 155:MEDLINE(R) 1966-2003/Apr W1
(c) format only 2003 The Dialog Corp.
*File 155: Medline has been reloaded and accession numbers have changed. Please see HELP NEWS 155.

Set Items Description
--- ----- -----------
? s gc or glycoprotein(3n)c or ul44
20917 GC
67091 GLYCOPROTEIN
759835 C
1098 GLYCOPROTEIN(3N)C
52 UL44
S1 21831 GC OR GLYCOPROTEIN(3N)C OR UL44
? s vivo
S2 320504 VIVO
? s s1 and s2
21831 S1
320504 S2
S3 1388 S1 AND S2
? s simplex or hsv
28196 SIMPLEX
11600 HSV
S4 29568 SIMPLEX OR HSV
? s s3 and s4
1388 S3
29568 S4
S5 43 S3 AND S4
? t s5/7/4 6 10-12 15 21 26 28 30
5/7/4
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.
11449593 98332798 PMID: 9665870
Viral interference with antibody and complement.
Lubinski J; Nagashunmugam T; Friedman H M
Department of Medicine, University of Pennsylvania School of Medicine, 536 Johnson Pavilion, Philadelphia, PA, 19104-6073, USA.
Seminars in cell & developmental biology (ENGLAND) Jun 1998, 9 (3) p329-37, ISSN 1084-9521 Journal Code: 9607332
Contract/Grant No.: AI 33063; AI; NIAID; HL 28220; HL; NHLBI
Document type: Journal Article; Review; Review, Tutorial
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Viruses have evolved strategies to evade immunity mediated by antibody and complement. Herpesviruses and coronaviruses encode IgG Fc binding proteins that inhibit IgG activity, enabling the virus or infected cell to escape antibody attack. Herpesviruses, vaccinia virus and HIV-1 have the capacity to interfere with complement, either by incorporation of cellular complement regulatory proteins into the virion envelope or cell membrane, or by expression of viral molecules that mimic functions of complement regulatory proteins. The structure and biological activities of herpes simplex virus type 1 (HSV-1) glycoproteins gE, gI and gC are described. These glycoproteins protect HSV from immune attack; HSV-1 gE/gI form a complex that binds the Fc domain of IgG while gC is a C3b binding complement regulatory protein, providing a survival advantage to the virus in vitro and in vivo by inhibiting immune functions. Copyright 1998 Academic Press. (83 Refs.)
Record Date Created: 19980812
Record Date Completed: 19980812

5/7/6
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.
11228465 98105734 PMID: 9444989
Attenuation of the vaccine Oka strain of varicella-zoster virus and role of glycoprotein C in alphaherpesvirus virulence demonstrated in the SCID-hu mouse.
Moffat J F; Zerboni L; Kinchington P R; Grose C; Kaneshima H; Arvin A M
Department of Pediatrics, Stanford University School of Medicine, California 94305-5208, USA.
Journal of virology (UNITED STATES) Feb 1998, 72 (2) p965-74, ISSN 0022-538X Journal Code: 0113724
Contract/Grant No.: AI09195; AI; NIAID; AI20459; AI; NIAID; HD07249; HD; NICHD; +
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
The SCID-hu mouse implanted with human fetal tissue is a novel model for investigating human viral pathogenesis. Infection of human skin implants was used to investigate the basis for the clinical attenuation of the varicella-zoster virus (VZV) strain, V-Oka, from which the newly licensed vaccine is made. The pathogenicity of V-Oka was compared with that of its parent, P-Oka, another low-passage clinical isolate, strain Schenke (VZV-S), and VZV-Ellen, a standard laboratory strain. The role of

glycoprotein C (gC) in infectivity for human skin was assessed by using gC-negative mutants of V-Oka and VZV-Ellen. Whereas all of these VZV strains replicated well in tissue culture, only low-passage clinical isolates were fully virulent in skin, as shown by infectious virus yields and analysis of implant tissues for VZV DNA and viral protein synthesis. The infectivity of V-Oka in skin was impaired compared to that of P-Oka, providing the first evidence of a virologic basis for the clinical attenuation of V-Oka. The infectivity of V-Oka was further diminished in the absence of gC expression. All strains except gC-Ellen retained some capacity to replicate in human skin, but cell-free virus was recovered only from implants infected with P-Oka or VZV-S. Although VZV is closely related to herpes simplex virus type 1 (HSV-1) genetically, experiments in the SCID-hu model revealed differences in tropism for human cells that correlated with differences in VZV and HSV-1 disease. VZV caused extensive infection of epidermal and dermal skin cells, while HSV-1 produced small, superficial lesions restricted to the epidermis. As in VZV, gC expression was a determinant for viral replication in skin. VZV infects human CD4+ and CD8+ T cells in thymus/liver implants, but HSV-1 was detected only in epithelial cells, with no evidence of lymphotropism. These SCID-hu mouse experiments show that the clinical attenuation of the varicella vaccine can be attributed to decreased replication of V-Oka in skin and that tissue culture passage alone reduces the ability of VZV to infect human skin in vivo. Furthermore, gC, which is dispensable for replication in tissue culture, plays a critical role in the virulence of the human alphaherpesviruses VZV and HSV-1 for human skin.

Record Date Created: 19980218

Record Date Completed: 19980218

5/7/10

DIALOG(R)File 155:MEDLINE(R)

10932128 97284439 PMID: 9139853

Generation of an anti-tumour immune response in a non-immunogenic tumour: HSVtk killing in vivo stimulates a mononuclear cell infiltrate and a Th1-like profile of intratumoural cytokine expression.

Vile R G; Castleden S; Marshall J; Camplejohn R; Upton C; Chong H

Imperial Cancer Research Fund Laboratory of Cancer Gene Therapy, London, UK. vile@europa.lif.icnet.uk

International journal of cancer. Journal international du cancer (UNITED STATES) Apr 10 1997, 71 (2) p267-74, ISSN 0020-7136 Journal Code: 0042124

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Direct delivery of the herpes simplex virus thymidine kinase (HSVtk) gene, in combination with the prodrug ganciclovir (GC), has been used for the treatment of localised, inoperable tumours. Several groups have shown that when rodent tumours are ablated in vivo with suicide genes, anti-tumour immunity can also be generated. Hence, this approach may also be useful in treating disseminated disease. Here we have studied the mechanisms associated with this anti-tumour immunity. In B16 HSVtk+ tumours being killed in vivo with GC treatment, we observed the induction of a pronounced intratumoural infiltrate of macrophages, CD4+ and CD8+ T cells. In addition, using reverse transcriptase polymerase chain reaction, expression of interleukin (IL)-2, IL-12, interferon-gamma (IFN-gamma), tumor necrosis factor-alpha (TNF-alpha) and granulocyte/macrophage colony-stimulating factor (GM-CSF) but not IL-4, IL-6 or IL-10, was observed, a profile of cytokine expression which resembles that of a Th1 immune response. To complement these findings, we also investigated the mechanisms by which expression of HSVtk leads to cell death. Our data show that B16/HSVtk+ cells die predominantly by necrosis, rather than apoptosis, on exposure to GC, a process which may be associated with the generation of anti-tumour inflammatory responses. From these data we propose a model for the induction of anti-tumour immunity using suicide genes and discuss the development of improved vectors for gene therapy to augment these effects in vivo.

Record Date Created: 19970523

Record Date Completed: 19970523

5/7/11

DIALOG(R)File 155:MEDLINE(R)

10806587 97096295 PMID: 8941319

Modified entry and syncytium formation by herpes simplex virus type 1 mutants selected for resistance to heparin inhibition.

Pertel P E; Spear P G

Department of Microbiology-Immunology, Northwestern University Medical School, Chicago, Illinois 60611, USA.

Virology (UNITED STATES) Dec 1 1996, 226 (1) p22-33, ISSN 0042-6822 Journal Code: 0110674

Contract/Grant No.: RO1 AI 36293-02; AI; NIAID

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Herpes simplex virus type 1 (HSV-1) mutants were selected by passage of HSV-1 (KOS) in HEp-2 cells such that binding and penetration occurred in the presence of heparin. Analysis of selected uncloned virus pools revealed that approximately 95% of virus formed syncytia and greater than 58% were gC-negative. Plaque-purified gC-negative syncytial mutants were more resistant than HSV-1 (KOS) to heparin inhibition, as was an engineered nonsyncytial recombinant deleted for gC, delta gC6. Thus, absence of gC was sufficient to explain the enrichment for gC-negative mutants. The syncytial

phenotype of most mutants mapped to a mutation in gK. Transfer of this mutation to HSV-1 (KOS) resulted in a recombinant that induced fusion of Vero cells but not HEp-2 cells and was more sensitive to heparin inhibition of entry, revealing a previously undescribed phenotype of mutations in gK. Engineered gC-negative virus containing the gK syncytial mutation induced fusion of both cell lines and was as resistant to heparin inhibition as was delta gC6. Because deletion of gC reduces infectivity of HSV-1 in the absence of heparin, mutations in gC combined with the syncytial mutation could have provided a selective advantage. Thus, absence of gC reduced heparin inhibition of binding and penetration while the combination of the gC and gK mutations enhanced spread through the HEp-2 cell monolayer by cell fusion. Because extreme selective pressure was required to favor these mutations and such mutations are rare in clinical isolates, the wild-type forms of gC and gK must provide for optimal viral replication and propagation in cell culture as well as in vivo, despite the view that gC is dispensable in cultured cells.

Record Date Created: 19970102

Record Date Completed: 19970102

5/7/12

DIALOG(R)File 155:MEDLINE(R)

10746587 97096295 PMID: 8941319

Modified entry and syncytium formation by herpes simplex virus type 1 mutants selected for resistance to heparin inhibition.

Pertel P E; Spear P G

Department of Microbiology-Immunology, Northwestern University Medical School, Chicago, Illinois 60611, USA.

Virology (UNITED STATES) Dec 1 1996, 226 (1) p22-33, ISSN 0042-6822 Journal Code: 0110674

Contract/Grant No.: RO1 AI 36293-02; AI; NIAID

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Herpes simplex virus type 1 (HSV-1) mutants were selected by passage of HSV-1 (KOS) in HEp-2 cells such that binding and penetration occurred in the presence of heparin. Analysis of selected uncloned virus pools revealed that approximately 95% of virus formed syncytia and greater than 58% were gC-negative. Plaque-purified gC-negative syncytial mutants were more resistant than HSV-1 (KOS) to heparin inhibition, as was an engineered nonsyncytial recombinant deleted for gC, delta gC6. Thus, absence of gC was sufficient to explain the enrichment for gC-negative mutants. The syncytial phenotype of most mutants mapped to a mutation in gK. Transfer of this mutation to HSV-1 (KOS) resulted in a recombinant that induced fusion of Vero cells but not HEp-2 cells and was more sensitive to heparin inhibition of entry, revealing a previously undescribed phenotype of mutations in gK. Engineered gC-negative virus containing the gK syncytial mutation induced fusion of both cell lines and was as resistant to heparin inhibition as was delta gC6. Because deletion of gC reduces infectivity of HSV-1 in the absence of heparin, mutations in gC combined with the syncytial mutation could have provided a selective advantage. Thus, absence of gC reduced heparin inhibition of binding and penetration while the combination of the gC and gK mutations enhanced spread through the HEp-2 cell monolayer by cell fusion. Because extreme selective pressure was required to favor these mutations and such mutations are rare in clinical isolates, the wild-type forms of gC and gK must provide for optimal viral replication and propagation in cell culture as well as in vivo, despite the view that gC is dispensable in cultured cells.

Record Date Created: 19970102

Record Date Completed: 19970102

5/7/15

DIALOG(R)File 155:MEDLINE(R)

10169091 22174913 PMID: 12186907

Herpes simplex virus type 1 evades the effects of antibody and complement in vivo.

Lubinski John M; Jiang Ming; Hook Lauren; Chang Yueh; Sarver Chad; Mastellos Dimitrios; Lambris John D; Cohen Gary H; Eisenberg Roselyn J; Friedman Harvey M

Department of Medicine, Division of Infectious Diseases, School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania 19104, USA.

Journal of virology (United States) Sep 2002, 76 (18) p9232-41, ISSN 0022-538X Journal Code: 0113724

Contract/Grant No.: R01 AI 33063; AI; NIAID; R01 DE14152; DE; NIDCR; R01 HL 28220; HL; NHLBI

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Herpes simplex virus type 1 (HSV-1) encodes a complement-interacting glycoprotein, gC, and an immunoglobulin G (IgG) Fc binding glycoprotein, gE, that mediate immune evasion by affecting multiple aspects of innate and acquired immunity, including interfering with complement components C1q, C3, C5, and properdin and blocking antibody-dependent cellular cytotoxicity. Previous studies evaluated the individual contributions of gC and gE to immune evasion. Experiments in a murine model that examines the combined effects of gC and gE immune evasion on pathogenesis are now reported. Virulence of wild-type HSV-1 is compared with mutant viruses defective in gC-mediated C3 binding, gE-mediated IgG Fc binding, or both immune evasion activities. Eliminating both activities greatly increased susceptibility of HSV-1 to antibody and complement neutralization in vitro

and markedly reduced virulence in vivo as measured by disease scores, virus titers, and mortality. Studies with C3 knockout mice indicated that other activities attributed to these glycoproteins, such as gC-mediated virus attachment to heparan sulfate or gE-mediated cell-to-cell spread, do not account for the reduced virulence of mutant viruses. The results support the importance of gC and gE immune evasion in vivo and suggest potential new targets for prevention and treatment of HSV disease.
Record Date Created: 20020820
Record Date Completed: 20021002

5/7/21
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.
08772990 20054504 PMID: 10587354
In vivo role of complement-interacting domains of herpes simplex virus type 1 glycoprotein gC.
Lubinski J; Wang L; Mastellos D; Sahu A; Lambris J D; Friedman H M
Department of Medicine, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania 19104, USA.
Journal of experimental medicine (UNITED STATES) Dec 6 1999, 190 (11) p1637-46, ISSN 0022-1007 Journal Code: 2985109R
Contract/Grant No.: RO1 HL 28220; HL; NHLBI
Erratum in J Exp Med 2000 Feb 21;191(4) following 746
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Immune evasion is critical for survival of viruses that establish persistent or recurrent infections. However, at the molecular level, little is known about how viruses evade immune attack in vivo. Herpes simplex virus (HSV)-1 glycoprotein gC has two domains that are involved in modulating complement activation; one binds C3, and the other is required for blocking C5 and properdin (P) binding to C3. To evaluate the importance of these regions in vivo, HSV-1 gC mutant viruses were constructed that lacked one or both gC domains and studied in a murine model of infection. Each gC region of complement regulation contributed to virulence; however, the C3 binding domain was far more important, as virus lacking this domain was much less virulent than virus lacking the C5/P inhibitory domain and was as attenuated as virus lacking both domains. Studies in C3 knockout mice and mice reconstituted with C3 confirmed that the gC domains are inhibitors of complement activation, accounting for a 50-fold difference in virulence between mutant and wild-type viruses. We conclude that the C3 binding domain on gC is a major contributor to immune evasion and that this site explains at a molecular level why wild-type virus resists complement attack.
Record Date Created: 20000113
Record Date Completed: 20000113

5/7/26
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.
07772940 93228436 PMID: 8385911
Molecular characterization of naturally occurring glycoprotein C-negative herpes simplex virus type 1.
Toh Y; Tanaka S; Liu Y; Hidaka Y; Mori R
Department of Virology, Faculty of Medicine, Kyushu University, Fukuoka, Japan.
Archives of virology (AUSTRIA) 1993, 129 (1-4) p119-30, ISSN 0304-8608 Journal Code: 7506870
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
We previously isolated glycoprotein C (gC)-negative herpes simplex virus type 1 (HSV-1) mutants, TN-1, TN-2 and TN-3, from a patient with recurrent herpetic keratitis at one-year intervals. In the present study, the molecular basis for the inability of these clinical isolates to express gC was examined. The nucleotide sequence of the gC gene of the TN-1 strain was compared with that of the HSV-1 KOS strain. In the open reading frame of the gC gene, there were 12 nucleotide differences between the TN-1 and KOS strains, seven of which led to amino acid substitutions. Importantly, one of them was the codon change from CAG for glutamine at position 280 to TAG for the amber termination codon. Accordingly, the TN-1 strain produced a truncated gC with a predicted molecular weight, which was secreted into the extracellular fluid. These results suggest that this amber mutation in the TN-gC gene results in a premature termination of gC translation and is the cause of the gC-negative phenotype of the TN strains. It is expected that these extremely rare HSV-1 strains will provide us with valuable information concerning the in vivo functions of gC, especially in ocular diseases.
Record Date Created: 19930507
Record Date Completed: 19930507

5/7/28
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2003 The Dialog Corp. All rts. reserv.
07359991 92223157 PMID: 1314100
In vivo expression of beta-galactosidase in hippocampal neurons by HSV-mediated gene transfer.
Fink D J; Sternberg L R; Weber P C; Mata M; Goins W F; Glorioso J C
Department of Neurology, University of Michigan, Ann Arbor 48105.
Human gene therapy (UNITED STATES) Feb 1992, 3 (1) p11-9, ISSN 1043-0342 Journal Code: 9008950
Contract/Grant No.: GM34534; GM; NIGMS; NF 27771; NF; NSF
Document type: Journal Article

Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Stereotactic inoculation of a herpes simplex virus (HSV) gene transfer vector into the hippocampus and caudate of rat brain resulted in limited and transient viral replication and the establishment of latency. Virus attenuation was achieved by insertional inactivation of a viral gene, Us3. Insertion of a lacZ reporter gene, under the control of the HSV glycoprotein C (gC) late gene promoter, allowed viral replication to be monitored in vivo. Unlike unattenuated virus, the Us3::pgC-lacZ recombinant caused little apparent damage to normal hippocampal morphology. Transient lacZ expression was detected in a considerable population of neurons of the dentate gyrus following hippocampal injection, whereas few positively staining neurons were present within the caudate after injection at that site. Latency-associated transcripts, the hallmark of latent infection, were detected in the brain 10 months after injection. This recombinant virus may be useful as a gene transfer vector for long-term expression of foreign genes in the central nervous system.

Record Date Created: 19920521
Record Date Completed: 19920521

5/7/30
DIALOG(R)File 155:MEDLINE(R)

06961648 91202128 PMID: 1849974

Glycoprotein C of herpes simplex virus type 1 is essential for the virus to evade antibody-independent complement-mediated virus inactivation and lysis of virus-infected cells.

Hidaka Y; Sakai Y; Toh Y; Mori R

Department of Virology, School of Medicine, Kyushu University, Fukuoka, Japan.

Journal of general virology (ENGLAND) Apr 1991, 72 (Pt 4) p915-21, ISSN 0022-1317 Journal Code: 0077340

Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Glycoprotein C (gC) of herpes simplex virus type 1 (HSV-1) is a receptor for the complement component C3b. We have previously isolated HSV-1 gC- strains (TN1, TN2 and TN3) from a patient with recurrent keratitis at three different times. These are very rare isolates because gC was thought to be essential for the virus in vivo. To determine whether gC modifies the interaction of complement with cell-free virus or virus-infected cells, we constructed gC+ recombinant viruses in which the intact gC gene of strain KOS was inserted into the TN1 virus genome. TN1 virus was inactivated by complement and TN1 virus-infected cells were lysed by complement; however, gC+ recombinant viruses became resistant to these effects of complement. These results suggest a role for gC in protection of both the virion envelope and the infected cell surface against damage by complement. TN1 virus was inactivated by complement from rats (Wistar, WKA, F344 and SD), guinea-pigs (Hartley) and humans, but not by complement from mice (C3H, DDD and BALB/c), which indicates that mice seem to be inappropriate as an experimental model for the study of HSV infection in which complement factors need to be considered.

Record Date Created: 19910523
Record Date Completed: 19910523

? log hold
11apr03 13:13:51 User208669 Session D2256.2
$2.79 0.871 DialUnits File155
$0.00 43 Type(s) in Format 6
$2.10 10 Type(s) in Format 7
$2.10 53 Types
$4.89 Estimated cost File155
$2.10 TELNET
$6.99 Estimated cost this search
$7.27 Estimated total session cost 0.948 DialUnits
Logoff: level 02.12.60 D 13:13:51